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EXAMINER

HANNETT, JAMES M

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2622

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

DETAILED ACTION

In view of the Decision on Appeal by the Board of Patent Appeals and interferences filed on 11/01/2006, PROSECUTION IS HEREBY REOPENED. A new grounds of rejection as recommended in the decision on appeal by the board of patent appeals and interferences is set forth below.

The TC director has approved of reopening prosecution by signing below:

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1: Claims 1, 4-6, 8,9,13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP-10-073864 Nemoto in view of USPN 3,559,542 Clapp in further view of USPN 5,455,711 Palmer.

2: As for Claim 1, Nemoto discloses a quick change lens mount for connecting a lens assembly to a camera board (51). The camera board (51) has an image recording device (CCD 53), a filter (61), and a filter housing (10). The filter (61) mounts within the filter housing (10), which is attached to the camera board (51) by screws (47). Nemoto, para. 0014. The lens mount includes a base (41) attached to the camera board (51) via the filter housing (10) by screws (45, 47). Nemoto, para. 0009. The base (41) includes an interior opening and a threaded coupling

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(Figure 1) for receiving a lens (43) (Figure 3). However, Nemoto does not disclose a "quick connect coupling having a pair of slots to permit passage of a keys and a pair of keyways extending circumferentially from ends of corresponding ones of said slots," nor does it disclose "a removable adapter coupled to said lens assembly, said removable adapter having a threaded interior opening to receive a threaded end of a lens housing and a base insert end" as recited in claim 1.

Clapp discloses an adapter used in a locking and unlocking mechanism for attachment of a lens mounting assembly (21) to a camera body (20) which ensures quick releasing and locking action of a lens. Clapp, col. 1, line 72 - col. 2, line 3. The camera body includes a seating ring (23) with a flange (23A) having one or more keyway notches (26) circumferentially spaced about the inner peripheral portion of the seating ring flange (23A). Clapp, col. 2, lines 39-42. Clapp discloses a removable adapter (lens mounting assembly 21) having a threaded interior opening to receive a threaded end of a lens housing. See Clapp, Figures 6 and 7. The adapter (21) also has a base insert end having locating lugs (26A) which project laterally from the inner or lower end of the lens housing (21). Clapp, col. 2, lines 46-48. The assembly of Clapp further includes a locking collar (28) disposed within and threadingly engaged with seating ring (23) and having keyway notches (31) in axial alignment with notches (26) in an unlocked position. Clapp, col. 2, lines 58-75. To lock the lens assembly to the base, the lens mounting assembly (21) is inserted into seating ring (23) and into locking collar (28). Then, locking collar (28) is rotated to effect axial displacement thereof with respect to seating ring (23) so that an internal shoulder (30) of locking collar (28) overrides and engages with a contacting surface (26B) of lug (26A). The axial displacement of locking collar (28) firmly seats it between lens mounting assembly (21) and

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flange (23A) of seating ring (23). Clapp, col. 3, lines 20-33. Clapp teaches, inter alia, that its quick release and locking mechanism is an improvement over other release and locking mechanisms for interchangeable or detachable lenses because its structure is less complicated to operate and is relatively inexpensive. Clapp, col. 1, lines 30-32.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the threaded lens mount of Nemoto with the adapter having a quick release and locking mechanism as taught in Clapp in order to more quickly and easily connect interchangeable lenses having threaded ends to the CCD camera of Nemoto.

Although the quick connect mechanism of Clapp is similar to the invention recited in claim 1 in that it uses slots and keys for locking engagement, the mechanism of Clapp does not explicitly disclose keyways. Rather, as described above, Clapp uses a rotatable locking ring having engagement surfaces that engage the lugs to lock the lens in place.

Palmer teaches a two-part adapter used to attach a lens to a night vision optical device. Palmer teaches that it was common in the field of optical devices, such as cameras, video cameras, projectors and the like to include a threaded aperture on the device to allow for secondary optical devices to be attached and that a large number of coupling devices exist in the prior art. Palmer, col. 1, lines 23-28 and 36-37. Palmer further teaches that many optical assemblies require bayonet style connectors while others require screw type connectors, such that when a person buys a secondary optical device, the person must also purchase a specific coupling adaptor to properly join the two components together. Palmer, col. 1, lines 41-48. As such, Palmer teaches that bayonet connectors were commonly-used in the optical device art to attach interchangeable lenses to optical devices, such as cameras.

A bayonet connector or fitting is a term of art that refers to a locking mechanism identical to the slots, keyways, and keys recited in claim 1. A generally-accepted definition of a "bayonet joint" is "a peculiar form of coupling, in which one circular piece, having a slot longitudinal for part of its length and transverse the remaining, is sleeved over another. The interior piece is provided with a stud which enters the slot, and, by turning, the two parts become locked so as to prevent withdrawal by longitudinal movement." Edward H. Knight, Knight's American Mechanical Dictionary 252 (1874). Another definition of "bayonet mount" is "a mount in which prongs or bayonets on the rim of the lens or lens accessory of a camera fit into slots in the camera to facilitate quick attachment (as in interchanging lenses)." Webster's Third International Dictionary, unabridged, 188 (1971). The examiner views it conspicuous that the definition of bayonet mount in the unabridged dictionary specifically defines the term within the context of interchangeable camera lenses, thus further demonstrating that such locking arrangements were commonly known in the optical device field as a way to attach lenses to optical devices.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the CCD camera of Nemoto, as modified with the adapter and quick connect mechanism of Clapp, to have used a conventional bayonet fitting on the base and base insert end of the adapter to provide a simpler and conventional quick connect fitting.

3: As for Claim 4, Nemoto in view of Clapp in further view of Palmer teaches the claimed invention as discussed in Claim 1.

Clapp further depicts a lens assembly that is coupled to the camera base by inserting the lens assembly into the cylindrical opening of the base and rotating the lens assembly so that the lens assembly is locked to the base. Clapp, col. 1, line 72 - col. 2, line 3 Clapp depicts in Figure 2

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a lens assembly that has a cylindrical surface with three keys affixed thereto equally spaced from each other on the cylindrical surface. However, Clapp does not teach that there should only be two keys or four keys.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the three keys with any number of keys including two keys and have them equally spaced from each other along the cylindrical surface. This design of a base and lens assembly with keys and keyways is beneficial over a threaded connection because it allows for a faster replacement of a lens assembly.

4: In regards to Claim 5, Nemoto discloses a quick change lens mount for connecting a lens assembly to a camera board (51). The camera board (51) has an image recording device (CCD 53), a filter (61), and a filter housing (10). The filter (61) mounts within the filter housing (10), which is attached to the camera board (51) by screws (47). Nemoto, para. 0014. The lens mount includes a base (41) attached to the camera board (51) via the filter housing (10) by screws (45, 47). Nemoto, para. 0009.

5: As for Claim 6, Official notice is taken that it was commonly known in the art at the time the invention was made to make the filter and camera housings out of a resilient material so as to shield the filter from impact.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the filter and camera housings out of a resilient material so as to shield the filter from impact.

6: In regards to Claim 8, Nemoto teaches in Paragraphs [0023 and 0023] of the translation that it is advantageous to manufacture a lens mount out of an elastic material to facilitate the

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assembly of a CCD camera by allowing for the easy insertion of a filter assembly and further to make the lens mount fixable. The elastic material is viewed as the elastomeric material.

7: As for Claim 9, As discussed above related to Claim 1, Nemoto discloses mounting a base (41) over an image recording device (CCD 43) and affixed to the camera board (51) by screws (45, 47). Nemoto does not describe using an adapter with a quick connect bayonet fitting for attaching the lens to the base.

Clapp teaches attaching a removable adapter (lens mounting assembly 21) to a lens assembly via a threaded opening, the adapter having a pair of keys (locating lugs 26A) at an end thereof opposite to the threaded opening (Figures 6 and 7). Clapp further teaches forming a base (seating ring (23) and flange (23A)) to lock to an end of the removable adapter, the base having an opening with slots (keyway notches (26)) circumferentially spaced about the inner peripheral portion of the seating ring flange (23A). Clapp, col. 2, lines 39-42. The slots (26) slidably receive and engage the keys (26A) on the removable adapter. Clapp, col. 2, lines 46-48. Clapp further teaches inserting and locking a lens assembly to the base. Clapp, col. 3, lines 19- 22.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the threaded lens mount of Nemoto with the adapter having a quick release and locking mechanism as taught in Clapp in order to more quickly and easily connect interchangeable lenses having threaded ends to the CCD camera of Nemoto.

Neither Nemoto nor Clapp disclose keyways for slidably receiving and engaging the keys on the removable adapter.

Palmer, as described above, disclose that it was common at the time of the invention to use a bayonet fitting for attaching interchangeable lenses to a camera body.

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Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the CCD camera of Nemoto, as modified with the adapter and quick connect mechanism of Clapp, to have used a conventional bayonet fitting on the base and base insert end of the adapter to provide a simpler and conventional quick connect fitting.

8: In regards to Claim 13, Official notice is taken that it was commonly know in the art at the time the invention was made to make the filter and camera housings out of a resilient material so as to shield the filter from impact.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the filter and camera housings out of a resilient material so as to shield the filter from impact.

9: As for Claim 15, Nemoto teaches in Paragraphs [0023 and 0023] of the translation that it is advantageous to manufacture a lens mount out of an elastic material to facilitate the assembly of a CCD camera by allowing for the easy insertion of a filter assembly and further to make the lens mount fixable. The elastic material is viewed as the elastomeric material.

Allowable Subject Matter

10: Claims 7 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Hannett whose telephone number is 571-272-7309.

The examiner can normally be reached on 8:00 am to 5:00 pm M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on 571-272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James M. Hannett
Examiner
Art Unit 2622



JMH
February 8, 2007



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PRIMARY EXAMINER
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